

REMARKS

Claims 1-3, 5-9, 11-15, 17-20 and 22-24 are pending in the application and all stand rejected.

Reconsideration and allowance of all pending claims is respectfully requested in view of the following:

Response to Rejection of Claims under 35 U.S.C. §103

Claims 1-3, 5-9, 11-15, 17-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittenbreder, Jr. (U.S. Patent No. 5,402,329) (Wittenbreder hereinafter), Gokhale et al. (U.S. Publication No. 2004/0046634) (Gokhale hereinafter), and Liu (U.S. Publication No. 2005/0078440) (Liu hereinafter). This rejection is defective and should be withdrawn.

The Office Action mentioned above states on page 2 that Gokhale "teaches a method of making a non-linear inductor by stacking laminations to produce an air gap of two or more different widths (Fig. 16), adjusting the air gap dimensions to produce a desired non-linear inductance characteristic for the inductor ([0008]-[0010]). Therefore, depending on the desired inductance characteristics (design choice), one could create an air gap with infinite different widths (i.e. have two slanted (non-parallel) opposed surfaces). Hence, Gokhale teaches an air gap having two non-parallel opposed surfaces." This statement is respectfully traversed and it is submitted that the cited references do not teach or suggest the elements of the pending claims either alone or in any combination.

As the PTO recognizes in MPEP §2142:

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The USPTO clearly cannot establish a *prima facie* case of obviousness in connection with the amended claims for the following reasons:

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, the references, alone, or in combination, do not teach a load dependent inductor including an air gap defined by first and second *non-parallel* opposed surfaces, as required by the pending claims.

The Examiner acknowledges in the Office Action that "Wittenbreder fails to teach an inductor whose inductance increases as current through the inductor decreases, nor does he teach shape of the core of the inductor, nor does he teach the supply system supplying power to an information handling system." Liu is only cited for disclosing "an information handling system (a notebook computer) comprising a processor, a memory coupled to the processor, and a power input coupled to the processor and memory." The deficiencies of Wittenbreder and Liu in this regard are not remedied by Gokhale, which is cited for its teaching of an inductor having an inductance that increases as current through the inductor decreases. It is submitted that the Examiner has misinterpreted the teaching of Gokhale and the combination of references fail to teach or suggest all of the limitations of the pending claims.

The Office Action points to Figure 16, the Abstract, and paragraphs [0008]-[0010], [0038], and [0060] in arguing that the inductor or core 70 has an air gap having two non-parallel opposed surfaces. See Office Action pages 2 & 3. However, nothing in the cited sections, or elsewhere in Gokhale teach or suggest anything other than an air gap having parallel opposing surfaces. Gokhale discloses air gaps 62 and 72 in figures 15 and 16 respectively which are described in paragraphs 59 and 60 as not being a "constant air gap" and thus showing two distinct air gaps g1 and g2. However, all the opposing surfaces are parallel. It is submitted that ***impermissible hindsight*** is used on page 2 of the Office Action by stating that "depending on the desired inductance characteristics (design choice), one could create an air gap with infinite different widths (i.e. have two slanted (non-parallel) opposed surfaces)." However, a quick search of Gokhale reveals that the terms "slanted" and "non-parallel" are *not found* in the Gokhale disclosure. A search also yields that the term "parallel" is *only* found in paragraph [0027] of the Gokhale disclosure describing a circuit placement of inductor 12 as being "connected between the cathode of each of diodes D1, D3, and D5 and on terminal of a capacitor 18, labeled as C, which is in parallel with load 20 represented in Fig. 1 by a resistor labeled Rload." Importantly, all of the figures showing air gaps g1 and g2 (Figs 12-16) show the air gaps g1 and g2 as having parallel opposing surfaces. Therefore, neither the specification nor the figures teach or suggest anything other than an air gap or air gaps having opposing parallel surfaces.

It is also submitted that assuming for the sake of argument, that even if the design choice led one to design an air gap with "infinite different widths" as suggested by the Examiner, (which is not taught or suggested by Gokhale, i.e. all of the Gokhale examples show two widths, g1 and g2) the different widths would necessarily be infinitely small parallel opposing surface steps or simply single points, which are not surfaces. Additionally, the term parallel generally is defined as "[b]eing an equal distance apart everywhere." The American Heritage College Dictionary, Third Edition 1993, Houghton Mifflin Company, P990. It is again submitted that one of ordinary skill in the art would find that the teachings and suggestions in Gokhale are for opposing surfaces of multiple air gaps g1 and g2 that are equal distance apart along the surface. As a result, the references applied by the Examiner in this rejection do not teach or suggest that the air gap surfaces be non-parallel. To the contrary, Gokhale and combinations of the other references only disclose parallel surfaces for the air gap.

Therefore, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the independent claims 1, 7, 13, 19, and 24 and their respective dependent claims, and a rejection under 35 U.S.C. §103(a) is not applicable.

There is still another compelling, and mutually exclusive, reason why the references cannot be combined and applied to reject the claims under 35 U.S.C. §103(a).

The PTO also provides in MPEP §2142:

[T]he Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. ...[I]mpmissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Recently, the Supreme Court ruled that the "teaching, suggestion, or motivation (TSM) test" for determining obviousness still applies, but should be used in a more "expansive and flexible" manner. *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. ___, 11 (2007). The Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of

two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *Id.* at 14-15, emphasis added.

In the present case, the Examiner has not expressed a reason why a person of ordinary skill in the art would combine the benefits of Wittenbreder with the benefits of Gokhale and Liu as required by the pending claims. Wittenbreder teaches a zero voltage switching pulse width modulated power converter. Gokhale teaches a low harmonic rectifier circuit with an inductor having multiple steps in an air gap. Liu teaches a notebook computer. If the benefits of Wittenbreder are combined with the benefits of Gokhale and Liu, as suggested by the Examiner, the result would not be the elements as required by the pending claims. The claims recite a load dependent inductor including an air gap defined by first and second *non-parallel* opposed surfaces, which, as described above, the suggested combination cannot achieve. In view of the above, a person of ordinary skill in the art would not have a reason to combine Wittenbreder with Gokhale and Liu. Therefore, there is simply no basis for combining the references to support a 35 U.S.C. §103(a) rejection of the claims.

Thus, in the present case it is clear that the USPTO's combination arises solely from hindsight based on the present disclosure without any reason why a person of ordinary skill in the art would combine the references as required by the claims. Therefore, for this mutually exclusive reason, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and the rejection under 35 U.S.C. §103(a) is not applicable.

Therefore, in light of at least the foregoing, independent claims 1, 7, 13, 19, and 24 and their respective dependent claims are submitted to be allowable.

The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



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